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Cheng-Hwa Liu

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EXAMINER

STERRETT, JONATHAN G

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3623

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/696,183	Applicant(s) LIU ET AL.	
	Examiner JONATHAN G. STERRETT	Art Unit 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. This Final Office Action is responsive to the amendment of 10 January 2009.
Currently Claims 1-24 are pending in the application.

Response to Argument

The applicant's arguments have been fully considered but are not persuasive.

The applicant argues that the claims are statutory re 35 USC 101.

The examiner respectfully disagrees.

The recitation of "computer implemented method" occurs in the preamble.

There's no positive tie in the actual steps (i.e. the inputting, calculating, selecting and designating) so it's not clear that the method steps have an actual tie. For these reasons, the claim (and associated dependents) are still not statutory. The limitation at the end the describes a model would be considered what the Bilski decision calls "insignificant post solution activity" and would not recite a positive tie to the steps above.

The applicant argues that Jenkins fails to teach inputting a forecast rule to estimate orders. In support of this argument, the applicant alleges that prorating orders to meet demand is not inputting a forecast rule to estimate orders.

The examiner respectfully disagrees.

In Jenkins teachings, orders are balanced against the forecast. For example, in para's 32-36, various rules are given for how to adjust the forecast based on what

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orders have been achieved (i.e. the forecast is adjusted based on in hand orders). This is inputting a forecast rule to estimate orders because one of the rules is used to estimate what orders will come in (i.e. the forecast). What Jenkins is doing is not simply prorating orders - Jenkins is adjusting the forecast based on what orders have come in. This meets the claim limitation of inputting a forecast rule to estimate orders.

The applicant argues against the Official Notice that it is old and well known in the art to calculate a forecast hit rate, which corresponds to a forecast rule.

The examiner respectfully disagrees.

The limitation argued is the subject of Official Notice in combination with Jenkins. Support for the Official Notice can be found here. (The examiner also notes that the 1975 Meyer reference cited at the end of the office action supports the idea of using a threshold (i.e. a best fit calculation) to determine which model provides the best forecast, however Johnson below more explicitly ties this idea, known in the art of picking the best model or rule to use, into a manufacturing planning and scheduling context).

Supporting Quick Response Through Scheduling of Make-to-Stock Production/Inventory Systems

M. Eric Johnson, Gary Scudder, 1999, Decision Sciences
Volume 30 Issue 2, Pages 441 - 467

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 is rejected under 35 U.S.C. 101 based on Supreme Court precedent, and recent Federal Circuit decisions, the Office's guidance to examiners is that a § 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780,787-88 (1876).

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Here, applicant's method steps, fail the first prong of the new Federal Circuit decision since they are not tied to another statutory class and can be performed without the use of a particular apparatus. Thus, **Claim 1** is non-statutory since it may be performed within the human mind. **Claims 2-7** are dependent on **Claim 1** and are not statutory at least for the reasons given above for **claim 1**.

Claim 7 is a computer system comprised of modules. Modules are considered software not tangibly embodied on computer readable medium and thus are considered software per se. Software per se is printed matter and is not statutory under 35 USC 101. **Claims 8-12** depend on **Claim 7** and are similarly not statutory.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1, 3-7, 9-13, 15-19 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (U.S. Pub No. 2002/0188499 A1) in view of

Supporting Quick Response Through Scheduling of Make-to-Stock

Production/Inventory Systems, M. Eric Johnson, Gary Scudder, 1999, Decision Sciences, Volume 30 Issue 2, Pages 441 – 467 (hereinafter **Johnson**).

Regarding to claim 1, Jenkins et al. discloses the invention substantially as claimed. Jenkins et al. discloses a computer implemented method of dynamic customer demand forecasting (paragraph [0002], lines 1-2), comprising using a computer (i.e. external system/web-client, see fig. 1b) to perform the steps of:

inputting at least one forecast rule (paragraph [0028], lines 1-4, paragraph [0029], lines 1-3); accumulating forecasted demand (paragraph [0030], lines 7-10), selecting a highest hit rate from the forecast hit rate; and designating the forecast rule corresponding to the highest hit rate as a target rule (paragraph [0034], lines 1-3, paragraph [0037], lines 1-7). However, Jenkins et al does not explicitly disclose calculating at least one forecast hit rate, each of which corresponds to a forecast rule. It is common knowledge in the prior art (Official Notice) to calculate (i.e. accumulate) a forecast hit rate (i.e. orders) corresponding to a forecast rule when accumulating forecasted demand. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for the method of Jenkins et al. to include to feature of calculating at least one forecast hit rate (i.e. orders), each of which corresponds to a forecast rule. The motivation for doing so would have been to adjust/modify the forecasted demand by selecting the highest hit rate as the target rule.

Regarding to claim 7, Jenkins et al. discloses the invention substantially as claimed. Jenkins et al. discloses an apparatus (i.e. machine/server) of dynamic customer demand forecasting (see fig. 1a), comprising: inputting at least one forecast

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rule (paragraph [0028], lines 1-4, paragraph [0029], lines 1-3); accumulating forecasted demand (paragraph [0030], lines 7-10), accumulating forecasted demand (paragraph [0030], lines 7-10), selecting a highest hit rate from the forecast hit rate; and designating the forecast rule corresponding to the highest hit rate as a target rule (paragraph [0034], lines 1-3, paragraph [0037], lines 1-7).

Jenkins teaches a **manufacturing-control computer for allocating capacity in a manufacturing method** (para 7 and 8).

Jenkins teaches evaluating different kinds of rules but does not teach

providing the target rule to a capacity allocation model

Johnson teaches this (page 443 bottom to top of page 444). Johnson teaches evaluating different rules and then using the best one (as determined by an algorithm) for planning manufacturing scheduling.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Jenkins regarding using a computer in a manufacturing planning setting to include the teachings of Johnson regarding picking the best rule that provides the optimum planning and scheduling result because it would have provided a predictable result is using the best model for planning in a manufacturing context.

However Jenkins et al. does not explicitly disclose an input module, a calculation module, coupled to the input module, calculating at least one forecast hit rate, each of

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which corresponds to a forecast rule; a selection module, coupled to the calculation module, and a designation module, coupled to the selection module. It is common knowledge in the prior art for the apparatus of Jenkins et al. to include various modules (i.e. input module, calculation module, selection module, designation module, etc.) and to calculate (i.e. accumulate) a forecast hit rate (i.e. orders) corresponding to a forecast rule when accumulating forecasted demand. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for the apparatus of Jenkins et al. to include to feature of an input module, a calculation module, coupled to the input module, calculating at least one forecast hit rate, each of which corresponds to a forecast rule; a selection module, coupled to the calculation module, and a designation module, coupled to the selection module. The motivation for doing so would have been to separate the implementation of performing a specific function of the apparatus in order to adjust/modify the forecasted demand by selecting the highest hit rate as the target rule.

Regarding to claim 13, Jenkins et al. discloses the invention substantially as claimed. Jenkins et al. discloses a storage medium (i.e. external system/server, see fig. 1b) for storing a computer program providing a method of dynamic customer demand forecasting (paragraph [0002], lines 1-2), the method comprising the steps of: inputting at least one forecast rule (paragraph [0028], lines 1-4, paragraph [0029], lines 1-3); accumulating forecasted demand (paragraph [0030], lines 7-10); selecting a highest hit rate from the forecast hit rate; and designating the forecast rule corresponding to the highest hit rate as a target rule (paragraph [0034], lines 1-3, paragraph [0037], lines 1-

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7). However, Jenkins et al does not explicitly disclose calculating at least one forecast hit rate, each of which corresponds to a forecast rule. It is common knowledge in the prior art to calculate (i.e. accumulate) a forecast hit rate (i.e. orders) corresponding to a forecast rule when accumulating forecasted demand. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for the storage medium of Jenkins et al. to include to feature of calculating at least one forecast hit rate (i.e. orders), each of which corresponds to a forecast rule. The motivation for doing so would have been to adjust/modify the forecasted demand by selecting the highest hit rate as the target rule.

Regarding to claim 19, Jenkins et al. discloses the invention substantially as claimed. Jenkins discloses a system of dynamic customer demand forecasting (paragraph [0002], lines 1-2), comprising: an operation computer (i.e. external system/web client) (paragraph [0057], lines 1-5, see fig. 1b), inputting at least one forecast rule (paragraph [0028], lines 1-4, paragraph [0029], lines 1-3), accumulating forecasted demand (paragraph [0030], lines 7-10), selecting a highest hit rate from the forecast hit rate, and designating the forecast rule corresponding to the highest hit rate as a target rule (paragraph [0034], lines 1-3, paragraph [0037], lines 1-7); and at least one database, coupled to the operation computer, storing the forecast rule, the forecast hit rate, and the target rule (i.e. information for operation) (paragraph [0019], lines 1-3, paragraph [0028], lines 1-6). However, Jenkins et al does not explicitly disclose calculating at least one forecast hit rate, each of which corresponds to a forecast rule. It is common knowledge in the prior art to calculate (i.e. accumulate) a forecast hit rate

(i.e. orders) corresponding to a forecast rule when accumulating forecasted demand.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for the system of Jenkins et al. to include to feature of calculating at least one forecast hit rate (i.e. orders), each of which corresponds to a forecast rule. The motivation for doing so would have been to adjust/modify the forecasted demand by selecting the highest hit rate as the target rule.

Regarding to claims 3, 9, 15 and 21, Jenkins et al. discloses wherein the forecast rule comprises a forecast base rule (i.e. forecast for the period) (paragraph [0029], lines 1-3) and at least one customer defined rule (i.e. input by customer orders) (paragraph [0031], lines 1-2).

Regarding to claims 4, 10, 16 and 22 Jenkins et al. discloses integrating (i.e. supplement) the forecast base rule and the customer defined rule into the forecast rule (paragraph [0031], lines 1-2 and 6-8).

Regarding to claims 5, 11, 17 and 23, Jenkins et al. discloses the invention substantially as claimed. Jenkins et al. discloses prorating the forecast by demand to date (paragraph [0030], lines 1-3) and setting the need date on which the first demand occurs (i.e. date of the first order) (paragraph [0048], lines 5-6). However, Jenkins et al. does not explicitly disclose wherein the forecast base rule is produced according to the most current order. It is common knowledge in the prior art to produce the forecast base rule according to the most current order when prorating the forecast by demand to date. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for the computer implemented method, apparatus, storage

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medium and system of Jenkins et al. to include the feature of wherein the forecast base rule is produced according to the most current order. The motivation for doing so would have been to dynamically forecast demand and efficiently develop delivery capabilities of customer orders based on the most current orders.

Regarding to claims 6, 12, 18 and 24, Jenkins et al. discloses wherein the forecast hit rate is calculated according to orders (i.e. customer orders) (paragraph [0031], lines 1-2 and 6-8, paragraph [0034], lines 1-3, paragraph [0037], lines 1-7).

6. Claim 2, 8, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (U.S. Pub No. 2002/0188499 A1) in view of Borders et al. (U.S. Pat. No. 7,139,721 B2).

Regarding to claims 2, 8, 14 and 20, Jenkins et al. discloses the invention substantially as claimed. However, Jenkins et al. does not disclose providing the target rule to a capacity allocation model for capacity allocation. Borders et al. discloses providing customer order data (i.e. target rule) to determine an actual capacity allocation distribution. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the computer implemented method, apparatus, storage medium and system of Jenkins et al. with the feature of providing the target rule to a capacity allocation model for capacity allocation as taught by Borders et al., as both Jenkins et al. and Borders et al. are directed to a computer implemented method, apparatus, storage medium and system of dynamic customer demand forecasting. The motivation for doing so would have been to efficiently develop delivery

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capabilities of customer orders.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Selecting Economic Hypotheses by Goodness of Fit

Thomas Mayer

The Economic Journal, Vol. 85, No. 340 (Dec., 1975), pp. 877-883

Published by: Blackwell Publishing for the Royal Economic Society

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on Monday - Friday (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jonathan G. Sterrett/
Primary Examiner, Art Unit 3623
3-19-09

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